ABB ABB Series Service Manual

07 DI 93-I

1. Description

ABB 07 DI-93-I

3. Product Information

ABB 07 DI-93-I | Advant Controller 31 Input Unit

Digital Input Module

16 input channels 24 V DC, degree of protection IP67,

electrically isolated CS31 system bus connection

Intended purpose

The digital input module 07 DI 93-I is a remote module on

the CS31 system bus. It has 16 input channels with the

following features:

• Housing and connection according to IP67 degree of

protection.

• The CS31 bus line is looped through from module to

module (one PG9 screwed conduit entry each for

input and output).

• Each pair of inputs have their own connector and

thus can be unplugged individually.

• The inputs

• allow you to connect sensors with 2-pole and

3-pole technique (switching contacts, initiators

etc.)

• provide a short-circuit/overload-proof supply

voltage for the sensors, with can be loaded with

max. 50 mA by each sensor

• have a rated signal current of approx. 8 mA each

The module is mounted with screws.

The CS31 system bus connection is electrically isolated

from remaining module components.

The module offers diagnosis functions.

Displays and connections at the

module housing

1 16 yellow LEDs to indicate the signal status of the

inputs

2 LEDs "Bus Error", "Input Overload", "Supply Bus"

and "Supply I/O" indicating operating conditions

and errors

3 CS31 bus connector

4 8 connectors for 16 inputs

6 24 V DC power supply

7 Labelling fields

8 Bore holes for mounting

Connectors and terminals

Power supply 24 V DC Screw-type terminals 1.5 mm2

inside the housing,

PG9 gland for cable

CS31bus line Screw-type terminals 1.5 mm2

inside the housing,

PG9 gland for cable

16 inputs 8 x 5-pole M12 connectors (female)

2 inputs per connector

Power supply

Rated supply voltage 24 V DC

Current consumption, without output loads max. 80 mA

Conductor cross section max. 1.5 mm2 (with inserted jumper)

max. 2.5 mm2

(without inserted jumper)

Inputs

Number of inputs per module 16

Signal level of the inputs with signal 1 11 - 30 V

with signal 0 0 - 5 V

Signal input current with signal 1 approx. 8 mA

Input signal delay approx. 1 ms

Short-circuit protection for sensors PTC, IK > 1.6 A

Interfaces

Transmission standard between the central unit

and input/output modules EIA RS-485 (CS31 system bus)

Bus transmission time 387 µs

LED indicators

Input signals 1 yellow LED per channel

Bus Error 1 red LED

Input Overload (short-circuit or overload) 1 red LED (lights up, when there is an overload or a

short-circuit at the supply voltage for the sensors)

Supply Bus (power supply for bus logic) 1 green LED (lights up, when the supply voltage

is > 18 V)

Supply IO (power supply for inputs/outputs) 1 green LED (lights up, when the supply voltage

is > 18 V)

Mechanical data

Degree of protection according to DIN 40040, IEC 529 IP 67

Dimensions (length x width x height) 220 x 63.0 x 70.5 mm

Mounting dimension 208 mm (+0.5 mm)

Weight approx. 470 g

Ordering data Order No.

Input/output module 07 DI 93-I GJV3 0756 13 R0202